What we claim is:

1. A water-soluble polyimide precursor which gives a polyimide with a thermal decomposition temperature of 500°C or higher and a breaking elongation of 15% or greater when shaped into a film.

2. A water-soluble polyimide precursor according to claim 1, wherein the polyimide is amorphous based on X-ray analysis and has a glass transition temperature of 190-350°C.

3. A polyimide precursor solution prepared by dissolving a water-soluble polyimide precursor according to claim 1 in water.

4. A polyimide obtained by imidation of a water-soluble polyimide precursor according to claim 1.

5. A polyimide according to claim 4, wherein the polyimide has a heat sealing property.

6. A polyimide according to claim 4, which is used as a binder for a woven fabric or nonwoven fabric made of organic or inorganic fibers.

7. A powdered water-soluble polyimide precursor which is obtained by separation from the mixture resulting from reaction between a polyimide precursor comprising a tetracarboxylic acid component and an aromatic diamine component with 1,2-dimethylimidazole and/or 1-methyl-2-ethylimidazole at 0.7 molar equivalents or more with respect to the carboxyl groups of said polyimide precursor.

8. A water-soluble polyimide precursor according to claim 7, wherein the polyimide is amorphous based on X-ray analysis.

9. A water-soluble polyimide precursor according to claim 7, wherein the tetracarboxylic acid component contains at least 50% of a 2,3,3',4'-biphenyltetracarboxylic acid component.

10. A polyimide precursor solution prepared by dissolving a water-soluble polyimide precursor, according to claim 7, in water.

11. A polyimide obtained by imidation of a water-soluble polyimide precursor according to claim 7.

12. A polyimide according to claim 11, wherein the polyimide has a heat sealing property.

13. A polyimide according to claim 11, which is used as a binder for a woven fabric or nonwoven fabric made of organic or inorganic fibers.

14. A polyimide obtained by heat imidation of a water-soluble polyimide precursor, which exhibits heat resistance equivalent to that of a polyimide obtained by heat imidation of a non-water-soluble polyimide precursor obtained by reaction of the same tetracarboxylic acid and aromatic diamine components that give said water-soluble polyimide precursor, at the same composition.

15. A heat-resistant fiber impregnated material which retains at least 70% of its tensile strength even when left in an environment at 200°C for one hour and which is obtained by using a polyimide obtained from a water-soluble polyimide precursor as the binder resin for heat-resistant fibers.

16. A heat-resistant fiber impregnated material according to claim 15, wherein the polyimide is amorphous based on X-ray analysis.

17. A heat-resistant fiber impregnated material, according to claim 15, wherein the polyimide is obtained with at least 50% of a 2,3,3',4'-biphenyltetracarboxylic acid component as the tetracarboxylic acid component.

18. A heat-resistant fiber impregnated material wherein a polyimide obtained from a water-soluble polyimide precursor containing 1,2-dimethylimidazole and/or 1-methyl-2-ethylimidazole is used as the binder resin for heat-resistant fibers.

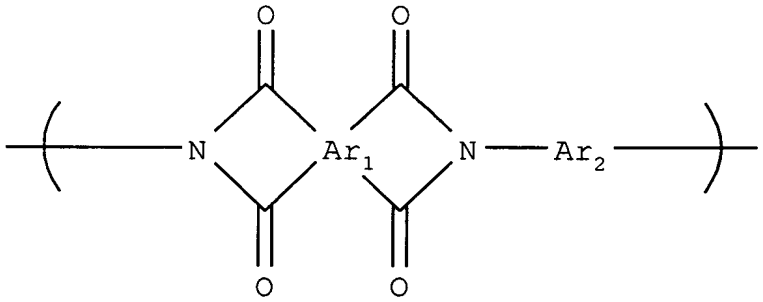
19. A heat-resistant fiber impregnated material according to claim 18, wherein the polyimide is amorphous, based on X-ray analysis.

20. A heat-resistant fiber impregnated material according to claim 18, wherein the polyimide is obtained

with at least 50% of a 2,3,3',4'-biphenyltetracarboxylic acid component as the tetracarboxylic acid component.

21. An impregnated sheet-like material prepared by further impregnating an impregnated material according to claim 18 with a heat-bonding polyimide.

22. An impregnated sheet-like material according to claim 21, wherein the heat-bonding polyimide is a polyimide with an imide unit represented by the following formula:



wherein Ar_1 is an aromatic tetracarboxylic dianhydride residue, comprising 3,3',4,4'-biphenyltetracarboxylic dianhydride residue and 2,3,3',4'-biphenyltetracarboxylic dianhydride residue in a molar ratio of 0:100-90:10, and Ar_2 is an aromatic diamine residue comprising 1,3-bis(4-aminophenoxy)benzene or 1,3-bis(3-aminophenoxy)benzene and p-phenylenediamine and/or diaminodiphenylether in a molar ratio of 10:90-100:0.

23. An impregnated sheet-like material obtained by further impregnating a heat-bonding polyimide into a heat-resistant fiber impregnated material prepared by using, as a binder for heat-resistant fibers, a polyimide obtained from a water-soluble polyimide precursor which gives a polyimide with a thermal decomposition temperature of 500°C or higher and a breaking elongation of 15% or greater when shaped into a film.

24. A laminate prepared by bonding a conductive metal layer onto an impregnated sheet-like material according to claim 21.

25. A laminate according to claim 24, wherein the metal layer is a copper foil.

26. A laminate prepared by bonding a conductive metal layer onto an impregnated sheet-like material according to claim 23.

27. A laminate according to claim 26, wherein the metal layer is a copper foil.